

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A system for providing network access translation device traversal to facilitate communications, comprising:

a network access translation (NAT) device;

a first Session Initiation Protocol (SIP) client located on the interior of the NAT device;

a second SIP client located on the exterior of the NAT device; and

a proxy server configured to maintain registration information relating to the first SIP client and the NAT device;

wherein the NAT device creates a first binding for communication with a registration port of the first SIP client in response to registration information sent from the first SIP client to the proxy server,

wherein the proxy server provides registration information relating to the first SIP client to the second SIP client and forwards at least one command from the second SIP client to the first SIP client using the first binding, and

~~wherein the second SIP client is able to initiate contact with the first SIP client and establish a communication session using the proxy server and the registration information maintained thereon; and~~

~~wherein the communication session is established by traversing, bypasses the proxy server and traverses the NAT device in accordance with a second binding between the registration port of the first SIP client and a port of the second SIP client.~~

2. (original) The system of claim 1 wherein the registration information is periodically provided to the proxy server based on a condition.

3. (original) The system of claim 2 wherein the condition includes startup of the first SIP client.

4. (currently amended) The system of claim 1 wherein the registration information includes an Internet Protocol (IP) address abstraction, NAT-translated IP address and registration port information.

5. (currently amended) The system of claim 1 wherein some of the registration information is provided to the proxy server by the first SIP client via the NAT device;

wherein some of the registration information is provided to the proxy server by the NAT device;

wherein upon the first SIP client forwarding some of the registration information to the proxy server via the NAT device, the NAT device creates the first binding; and a binding for the first SIP client; and

wherein the first binding and the registration information are used to allow the second SIP client to initiate contact with the first SIP client by traversing the proxy server and the NAT device.

6. (original) The system of claim 1 wherein the proxy server is part of a telephone gateway.

7. (currently amended) A system for providing network access translation device traversal to facilitate communications, comprising:

a network access translation (NAT) device;

a first Session Initiation Protocol (SIP) client located on the interior of the NAT device;

a second SIP client located on the exterior of the NAT device; and

a proxy server configured to receive registration information relating to the first SIP client and the NAT device over a first communication path through the NAT device, the first communication path terminating at a registration port of the first SIP device,

~~a proxy server configured to maintain registration information relating to the first SIP client and the NAT device, the proxy server further configured to~~

wherein the proxy server uses the registration information to initiate contact with the first SIP client on behalf of the second SIP client over the first communication path and to establish a communication session between the first and second SIP clients;

~~allow the second SIP client to initiate contact with the first SIP client and establish a communication session using the registration information;~~

wherein the communication session bypasses the proxy server and traverses the NAT device such that the first SIP client receives communications from the second SIP client at the registration port, is established by traversing the NAT device.

8. (original) The system of claim 7 wherein the registration information is periodically provided to the proxy server based on a condition.

9. (original) The system of claim 8 wherein the condition includes startup of the first SIP client.

10. (original) The system of claim 7 wherein the registration information includes an Internet Protocol (IP) address abstraction, NAT-translated IP address and port information.

11. (original) The system of claim 7 wherein the registration information includes information supplied by the first SIP client and the NAT device respectively;

wherein upon the first SIP client forwarding its portion of the registration information to the proxy server via the NAT device, the NAT device creates a binding for the first SIP client; and

wherein the binding and the registration information are used to allow the second SIP client to initiate contact and establish the communication session with the first SIP client by traversing the proxy server and the NAT device.

12. (original) The system of claim 11 wherein when the second SIP client wishes to initiate contact with the first SIP client, the second SIP client forwards a SIP INVITE command to the proxy server;

wherein upon receiving the SIP INVITE command, the proxy server uses the registration information to identify the NAT device and forwards the SIP INVITE command to the NAT device;

wherein upon the NAT device receiving the SIP INVITE command, the NAT device uses the binding to forward the SIP INVITE command to the first SIP client; and

wherein upon the first SIP client accepting the SIP INVITE command, SIP signaling between the first SIP client and the second SIP client can be conducted through the NAT device directly.

13. (original) The system of claim 7 wherein the proxy server is part of a telephone gateway.

14. (currently amended) A proxy server for providing network access translation device traversal to facilitate communications, comprising:

a lookup table configured to store registration information relating to a first Session Initiation Protocol (SIP) client and a network access translation (NAT) device, the registration information enabling communication with a registration port of the first SIP client over a first communication path through the NAT device; and

control logic configured to use the registration information to allow a second SIP client to initiate contact over the first communication path and establish a communication session with the first SIP client, the second SIP client being located on the exterior of the NAT device and the first SIP client being located on the interior of the NAT device;

wherein the proxy server assists in the creation of a second communication path through the NAT device for the communication session, the second communication path connecting the registration port of the first SIP client and a port of the second SIP client such that communication between the first and second SIP client bypasses the proxy server.

~~wherein the second SIP client is able to traverse the NAT device via the proxy server to establish the communication session with the first SIP client.~~

15. (currently amended) The proxy server of claim 14 further comprising:
control logic configured to receive a SIP INVITE command from the second SIP client upon the second SIP client wishing to initiate contact with the first SIP client; and
control logic configured to use the registration information to identify the NAT device and forward the SIP INVITE command to the NAT device over the first communication path;

~~wherein upon receiving the SIP INVITE command, the NAT device uses a binding associated with the first SIP client to forward the SIP INVITE command to the registration port of the first SIP client;~~

~~wherein upon the first SIP client accepting the SIP INVITE command, SIP signaling between the first SIP client and the second SIP client can be conducted over the second communication path, through the NAT device.~~

16. (original) The proxy server of claim 14 wherein the registration information is provided to the proxy server upon the first SIP client contacting the proxy server via the NAT device for registration.

17. (original) The proxy server of claim 16 wherein the first SIP client contacts the proxy server to provide registration information upon startup.

18. (original) The proxy server of claim 14 wherein the registration information includes an Internet Protocol (IP) address abstraction for the first SIP client, a NAT-translated IP address and port information.

19. (original) A telephone gateway incorporating the proxy server as recited in claim 14.

20. (currently amended) A method for providing network access translation device traversal to facilitate communications, comprising:

maintaining registration information relating to a first Session Initiation Protocol (SIP) client and a network access translation (NAT) device on a proxy server, the registration information enabling communication with a registration port of the first SIP client over a first communication path through the NAT device; and

using the registration information to allow a second SIP client to initiate contact and with the first SIP client over the first communication path, ~~establish a communication session with the first SIP client,~~ the first SIP client being located on the interior of the NAT device, the second SIP client being located on the exterior of the NAT device;

wherein the second SIP client uses the proxy server to initiate communication with the first SIP client over the first communication path;

wherein the first SIP client contacts the second SIP client through the NAT device using information sent in a SIP INVITE command from the proxy server, causing a ~~new binding~~ second communication path; and to be created in the NAT device;

wherein the second communication path bypasses the proxy server and traverses the NAT device such that the first SIP client receives communications from the second SIP client at the registration port.

~~wherein the second SIP client is able to traverse the NAT device using the established session with the first SIP client.~~

21. (currently amended) The method of claim 20 further comprising:

upon the second SIP client wishing to contact and establish the communication session with the first SIP client, directing the second SIP client to forward the SIP INVITE command to the proxy server;

directing the proxy server to use the registration information to identify the NAT device and forward the SIP INVITE command to the NAT device over the first communication path;

upon receipt of the SIP INVITE command, directing the NAT device to use a binding associated with the first SIP client to forward the SIP INVITE command to the registration port of the first SIP client; and

upon the first SIP client accepting the SIP INVITE command, conducting SIP signaling between the first SIP client and the second SIP client, using information contained in the SIP INVITE command, ~~through the NAT device, and~~ over the second communication path ~~and causing a new binding information to be created between a port of the second SIP client and the registration port of the first SIP client.~~

22. (original) The method of claim 20 further comprising:

providing the registration information to the proxy server upon the first SIP client contacting the proxy server via the NAT device for registration.

23. (original) The method of claim 22 wherein the first SIP client contacts the proxy server to provide registration information upon startup.

24. (original) The method of claim 20 wherein the registration information includes an Internet Protocol (IP) address abstraction for the first SIP client, a NAT-translated IP address and port information.

25. (original) A telephone gateway utilizing the method as recited in claim 20.

26. (currently amended) A method for providing network access translation device traversal to facilitate communications, comprising:

directing a network access translation device (NAT) to create a first communication path to a registration port of a recipient SIP client coupled to the NAT device in response to a registration function of the recipient SIP client;

directing a proxy server to receive an Session Initiation Protocol (SIP) INVITE command issued from an initiating SIP client upon the initiating SIP client wishing the initiate contact and establish a communication session with ~~a~~the recipient SIP client, the initiating SIP

client being located on the exterior of a ~~the~~ network access translation (NAT) device and the recipient SIP client being located on the interior of the NAT device;

directing the proxy server to use registration information relating to the recipient SIP client and the NAT device to identify the NAT device and forward the SIP INVITE command to the NAT device over the first communication path;

upon receipt of the SIP INVITE command, directing the NAT device to use a binding associated with the recipient SIP client to forward the SIP INVITE command to the registration port of the recipient SIP client; and

upon the recipient SIP client accepting the SIP INVITE command, conducting SIP signaling between the registration port of the recipient SIP client and the initiating SIP client, using information contained in the SIP INVITE command, through the NAT device, and causing new binding information to be created.

27. (currently amended) The method of claim 26 further comprising:

providing the registration information to the proxy server upon the recipient SIP client contacting the proxy server over the first communication path in connection with the registration function. ~~via the NAT device for registration.~~

28. (original) The method of claim 27 wherein the recipient SIP client contacts the proxy server to provide registration information upon startup.

29. (original) The method of claim 26 wherein the registration information includes an Internet Protocol (IP) address abstraction for the first SIP client, a NAT-translated IP address and port information.

30. (original) A telephone gateway utilizing the method as recited in claim 26.